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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,955	03/22/2004	Charles E. Anderson JR.	090936.0551	9889

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EXAMINER

JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/805,955	Applicant(s) ANDERSON ET AL.	
	Examiner Stephen M. Johnson	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13, 15-17 and 19-25 is/are rejected.
7) ☒ Claim(s) 14 is/are objected to.
8) ☒ Claim(s) 1-17 and 19-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 depends from itself.

2. Claims 1-13, 15-16, 19-21, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Giraud.

Giraud discloses a multi-layered armor comprising:

- | | |
|--|-------------------------------------|
| a) an outer accelerating layer; | 51 or 61 |
| b) a plug layer; | [52 or 62] or [53 or 63] |
| c) an energy absorbing layer; | [53 or 63] or 2 |
| d) plug accelerated in motion before the projectile
perforates the plug; | see fig. 4b |
| e) the plugs are made of a material different from the
material of the accelerating layer; | col. 5, lines 14-19 |
| f) the plug is operable to obtain the velocity of the
projectile before the projectile perforates the plug; | see fig. 4b; col. 4,
lines 16-48 |
| g) wherein the projectile-plug combination is formed
prior to projectile perforation of the plug; | see fig. 4b |
| h) plugs of a composite material; | col. 5, lines 14-19 |
| i) the accelerating layer is made of a ceramic; and | col. 5, lines 14-19 |
| j) the energy absorbing material is a fabric material
or polymeric fiber material. | col. 6, lines 9-19 |

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3. Applicant's arguments are addressed as follows. It is argued that the claim limitation directed to "that plug is operable to obtain the velocity of the projectile before the projectile perforates the plug" is lacking. A comparison of figs. 4a and 4b shows the plug (52 or 62) prior to acceleration and after acceleration to a particular velocity. Note that in the fig. 4b illustration when projectile and plug have the same velocity the plug has not perforated the projectile. It is further argued that is col. 6, lines 41-46; col. 6, lines 47-53; and in col. 6, lines 55-58; the layers have various different functions. Please note that the discussion included in col. 6, lines 41-58 is directed to the crushing material 2 and not toward the acceleration layer or the plug layer (51, 61, 52, 62). Applicant further argues that the claim limitation directed to "wherein a projectile-plug combination is formed before the projectile perforates the plug, such that the projectile-plug combination increases the presented area of impact to an area greater than that of the projectile when the projectile-plug combination reaches the energy absorbing layer". In fig. 4b, note that the projectile-plug combination (1 with 52 and/or 62) or (1 with 53 and/or 63) has increased the area of impact presented to the energy absorbing layer 2. With regard to the argument that nowhere in Giruad is the plug-projectile combination formed before the next layer is reached, note that each of figures 4a and 4b teach a plug-projectile combination since both figures illustrate both a plug and a projectile. Further, note that what applicant has claimed does not coincide with what applicant is now arguing. Applicant has claimed "that plug is operable to obtain the velocity of the projectile before the projectile perforates the plug" and this claim language is met as recited above.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giraud in view of Jones.

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Giraud applies as previously recited. However, undisclosed is a ceramic plate that is alumina or a single oxide. Jones teaches a ceramic plate that is alumina (col. 1, lines 10-12) as well as a ceramic plate that is a single oxide (see claim 3). Applicant is substituting one material type of ceramic for another in an analogous art setting as explicitly encouraged by both the primary and secondary references (see col. 5, lines 14-19 of Giraud and claim 3 of Jones). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Jones to the Giraud armor and have an armor with a ceramic material of a specific type.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giraud in view of Cohen (908 B1).

Giraud applies as previously recited. However, undisclosed is a ceramic plate that is titanium diboride or a single oxide. Cohen (908 B1) teaches a ceramic plate that is titanium diboride (see claim 13) as well as a ceramic plate that is a single oxide (see claim 13). Applicant is substituting one material type of ceramic for another in an analogous art setting as explicitly encouraged by both the primary and secondary references (see col. 5, lines 14-19 of Giraud and claim 13 of Cohen). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Cohen (908 B1) to the Giraud armor and have an armor with a ceramic material of a specific type.

6. Claims 22-24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giraud in view of Cohen (635).

Giraud applies as previously recited. However, undisclosed is an absorbing layer that is

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Kevlar (an aramid fiber) or a polyethylene material. Cohen (635) teaches an absorbing layer that is Kevlar or polyethylene fiber material (see col. 7, lines 51-56). Applicant is substituting one material type for another as explicitly encouraged by both the primary and secondary references (see col. 5, lines 14-19 of Giraud and col. 7, lines 51-56 of Cohen (635)). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Cohen (635) to the Giraud armor and have an armor with an absorbing layer of a particular type of fiber material.

7. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened-statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

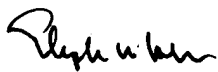
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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877.

The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



STEPHEN M. JOHNSON
PRIMARY EXAMINER

Stephen M. Johnson
Primary Examiner
Art Unit 3641

SMJ
May 27, 2005